A METHOD AND APPARATUS FOR SPATIALLY CONFINED ELECTROPORATION

ABSTRACT

The invention provides hollow-tip-electrodes for spatially localized delivery of substances to one or more biological targets present in a population comprising target and non-target molecules, macromolecules, and/or cells. The invention also provides electrode plates for receiving one or more of such tips, tip-electrode plates comprising electrode plates comprising one or more electrode tips, and systems comprising tip-electrodes and containers for containing one or more biological targets, e.g., such as molecules, macromolecules, and/or cells. The invention further provides methods for using such systems and components thereof. In one preferred aspect, the systems are used for spatially confined electroporation of cells and cell structures. The invention facilitates high throughput screening of agents (e.g., such as drugs) that act on intracellular targets.